

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A method for automatic management of demand for non-durables, utilizing asymmetric downstream and upstream communication between a Multi Utility provider and End-users said method comprising:

- a) providing at End-users' premises distributed intelligent home gateways specialized—electronic—boxes having microprocessor capability for performing the following functions:
receiving radio broadcast control signals by a RDS, RBDS OR DAB radio receiver comprised in said distributed intelligent home gateways ~~electronic~~ ~~boxes~~ at the End-users' premises from a Multi Utility provider;
- b) determining whether information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings, utilizing said distributed intelligent home gateways ~~electronic~~ ~~boxes~~, satisfies a condition for any End-user non-durable consuming apparatuses connected to a network delivering said non durables to be switched on or off;

if information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings, utilizing said distributed intelligent home gateways, satisfies a condition for any End-user non-durable consuming apparatuses connected to a network delivering said non durables to be switched on, then ~~[[so,]]~~ ~~turn[[ing]]~~ connected non-durable consuming apparatuses on by utilizing switching means in said distributed intelligent home gateways ~~electronic~~ ~~boxes~~,

if ~~[[not,]]~~ information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings, utilizing said distributed intelligent home gateways, satisfies a condition for any End-user non-durable consuming

apparatuses connected to a network delivering said non durables to be switched off, then turn[[ing]] connected non-durable consuming apparatuses off by utilizing switching means in said distributed intelligent home gateways electronic-boxes,

- c) End-users programming said distributed intelligent home gateways ~~[[boxes]]~~ by setting parameter values in accordance with End-users' priorities;
- d) transmitting from the Multi Utility provider at least one radio broadcast control signal which radio broadcast control signal is received by said radio receiver in all said distributed intelligent home gateways ~~electronic-boxes~~;
wherein said Multi Utility provider broadcasts the control signal via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems;
- e) said distributed intelligent home gateways ~~electronic-boxes~~ taking automatic turn-off or turn-on action for some non-durable consuming apparatuses connected to said network in accordance with stored control algorithms, the parameter values set by said End-users and information provided by said control signal, and wherein
- f) said distributed intelligent home gateways ~~electronic-boxes~~ comprising a metering point gateway transmitting back to said Multi Utility provider, through a telephone or mobile telephone network, instant or semi-instant non-durable consumption values measured at said End-users' premises by said distributed intelligent home gateways ~~electronic-boxes~~.

2. (Previously Presented) The method of claim 1, wherein said End-users set parameter values in accordance with estimated importance of their various apparatuses.

3. (Previously Presented) The method of claim 1, wherein said End-users set parameter values based on pricing of the non-durables.

4. (Previously Presented) The method of claim 1, wherein said Multi Utility provider broadcasts a control signal containing pricing information regarding said non-durables.
5. (Previously Presented) The method of claim 4, wherein the control signal contains pricing information regarding pricing valid for a certain time period.
6. (Previously Presented) The method of claim 1, wherein said Multi utility provider broadcasts a control signal containing information regarding rationing.
7. (Previously Presented) The method of claim 1, wherein said Multi Utility provider provides at least one of electrical energy, thermal energy, gas and freshwater to a community of End-users.
8. (Previously Presented) The method of claim 1, wherein said Multi Utility provider broadcasts the control signal via at least one commercial radio broadcasting station.
9. (Cancelled)
10. (Previously Presented) The method of claim 1, wherein said Multi Utility provider broadcasts the control signal via a satellite radio broadcast system.
11. (Currently Amended) The method of claim 1, wherein said distributed intelligent home gateways ~~[[boxes]]~~ transmit back consumption values via any of a telephone network and a mobile telephone network.
12. (Currently Amended) The method of claim 1, wherein communication between said distributed intelligent home gateways ~~electronic boxes~~ and said non-durable consuming apparatuses inside said End-users' premises is effected by use of PLC technology, preferably in accordance with an X10 standard.

13. (Currently Amended) The method of claim 1, wherein any one of said distributed intelligent home gateways ~~electronic-boxes~~ is physically or functionally divided in an intelligent home gateway and a metering gateway,

said intelligent home gateway receiving said control signals, decoding them, determining ON and OFF conditions for all connected apparatuses and transmitting turn-off and turn-on commands to bring said apparatuses into the determined condition, while also communicating with said metering gateway, and

said metering gateway performing two-way communication with said intelligent home gateway, performing communication with at least one non-durables metering device, and transmitting at least metering data to said Multi Utility provider.

14. (Previously Presented) The method of claim 13, wherein said intelligent home gateway transmits commands for turning connected apparatuses in an End-user's premises off and on, via a Power Line Carrier (PLC) system, preferably an X10 system.

15. (Previously Presented) The method of claim 13, wherein said intelligent home gateway turns off connected apparatuses in an End-user's premises in accordance with non-durable price thresholds set by the End-user for respective apparatuses or for respective apparatus groups.

16. (Previously Presented) The method of claim 13, wherein said intelligent home gateway turns off connected apparatuses in an End-user's premises in accordance with a rationing command from said Multi Utility provider and non-durable consuming apparatus priority settings entered by the End-user.

17. (Currently Amended) The method of claim 1, wherein non-durables production in distributed generation units (DG) attached to any of industrial End-users, commercial End-users and groups/communities of private End-users, is governed by said

distributed intelligent home gateways ~~electronic-boxes~~ and in accordance with the End-users' settings and priorities.

18. (Currently Amended) The method of claim 17, wherein a distributed generation unit (DG) attached to a group/community of private End-users is governed by an algorithm taking all said private End-users' settings and priorities into consideration, said algorithm being stored in a computer memory in a computer dedicated for controlling said distributed generation unit and being in communication with said distributed intelligent home gateways ~~electronic-boxes~~.

19. (Currently Amended) The method of claim 1, wherein service restoration from said Multi Utility provider after an outage situation is effected by broadcasting restoration signals to bring about step-wise turning on loads at End-users' premises by appropriate action by said distributed intelligent home gateways ~~electronic-boxes~~.

20. (Currently Amended) A system for automatic management of demand for non-durables, utilizing asymmetric downstream and upstream communication between a Multi Utility provider and End-users said system comprising

distributed intelligent home gateways ~~specialized-electronic-boxes~~ at End-users' premises, with microprocessor capability for performing the following functions:

turning connected non-durable consuming apparatuses on and off, receiving radio broadcast control signals from a Multi Utility provider, means for determining whether information contained in said radio broadcast control signals, stored algorithms and End-user adjustable parameter value settings satisfies a condition for any connected non-durable consuming apparatus to be switched on;

if so turning connected non-durable consuming apparatuses on by utilizing switching means in said distributed intelligent home gateways ~~electronic-boxes~~,

if not, turning connected non-durable consuming apparatuses off, by utilizing switching means in said distributed intelligent home gateways electronic-boxes,

said system further comprising

non-durable consumption metering devices at said End-users' premises, in communication with said distributed intelligent home gateways electronic-boxes, and

a radio broadcasting network for broadcasting from a Multi Utility provider a radio broadcast control signal to be received by all said distributed intelligent home gateways electronic-boxes wherein said Multi Utility provider broadcasts the control signal via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems,

wherein

said distributed intelligent home gateways specialized electronic-boxes are programmable by said End-users for setting parameter values in accordance with said End-users' priorities,

said distributed intelligent home gateways ~~[[boxes]]~~ are operative to take automatic turn-off and turn-on action for some non-durable consuming apparatuses in accordance with stored control algorithms, said parameter values and information provided by said control signal.

21. (Previously Presented) The system of claim 20, wherein said broadcasting network is a commercial radio broadcasting network.

22. (Previously Presented) The system of claim 20, wherein said broadcasting network is a satellite radio broadcast system.

23. (Previously Presented) The system of claim 20, wherein a return transmission path for transmitting back said consumption values is via any of a telephone network and a mobile telephone network.

24. (Currently Amended) The system of claim 20, wherein a communication path between said distributed intelligent home gateways ~~electronic-boxes~~ and said non-durable consuming apparatuses in said End-users' premises is a wire path, preferably relying on PLC technology and an X10 standard.

25. (Previously Presented) The system of claim 20, wherein said broadcasting network includes microprocessor capability for encrypting data to be broadcast to End-users.

26. (Currently Amended) The system of claim 20, including distributed generation units (DG) for additional production of non-durables, attached to any of industrial End-users, commercial End-users and groups/communities of private End-users, said distributed generation units being governed by said distributed intelligent home gateways ~~electronic-boxes~~ and in accordance with the End-users' setting and priorities.

27. (Currently Amended) The system of claim 20, wherein anyone of said distributed intelligent home gateways ~~specialized-electronic-boxes~~ is physically or functionally divided in an intelligent home gateway and a metering gateway, said intelligent home gateway being capable of receiving said control signals, decoding them, determining ON and OFF conditions for all connected apparatuses and transmitting turn-off and turn-on commands to bring said apparatuses into the determined condition, as well as communicating with said metering gateway, and

said metering gateway being capable of performing two-way communication with said intelligent home gateway, performing communication with at least one non-durables metering device, and transmitting at least metering data to said Multi Utility provider.

28. (Previously Presented) The system of claim 27, wherein the intelligent home gateway includes at least one of a microprocessor and an embedded controller.

29. (Previously Presented) The system of claim 28, wherein an End-user terminal is attached to said intelligent home gateway for presentation of messages to the End-user, decoded by said microprocessor.

30. (Previously Presented) The system of claim 27, wherein the intelligent home gateway includes a radio antenna and a radio signaling decoder for at least one of the RDS, RBDS and DAB systems.

31. (Previously Presented) The system of claim 27, wherein the intelligent home gateway has connected thereto a satellite reception antenna for receiving a satellite broadcast signal.

32. (Previously Presented) The system of claim 27, wherein the metering gateway includes a microprocessor for decoding information from the intelligent home gateway and from said metering devices.

33. (Previously Presented) The system of claim 20, wherein said non-durable is electric power, said Multi Utility provider is an Electrical Utility provider and said consumption metering devices are electricity meters.

34. (Currently Amended) A computer program product containing any of software code portions and computer program elements which, when said computer program product is run on any of a computer, processor and controller, causes said computer processor or controller to carry out the steps of:

determining whether information contained in received radio broadcast control signals, stored algorithms and End-user adjustable parameter value settings satisfies a condition for any connected non-durable consuming apparatus to be switched on;

if so turning connected non-durable consuming apparatuses on by utilizing switching means in said distributed intelligent home gateways ~~electronic boxes~~,

if not, turning connected non-durable consuming apparatuses off by utilizing switching means in said distributed intelligent home gateways electronic-boxes,
accepting End-users programmed distributed intelligent home gateways specialized electronic-boxes which have microprocessor capability and have been programmed by setting parameter values in accordance with End-users' priorities;
configuring said distributed intelligent home gateways ~~[[boxes]]~~ to take automatic turn-off or turn-on action for some non-durable consuming apparatuses in accordance with stored control algorithms, parameter values set by said End-users and information provided by said control signal.

35. (Previously Presented) The computer program product of claim 34, included in a computer readable medium.

36. (Currently Amended) A device configured to generate and send a RDS, RBDS or DABA radio broadcast control signal with capability of carrying data for providing operator information from a Multi Utility provider to distributed intelligent home gateways specialized electronic-boxes at End-users' premises wherein said Multi Utility provider broadcasts the radio control signal via at least one radio broadcasting station system, thereby to enable automatic management of demand for non-durables provided by a Multi Utility provider, said radio broadcast signal containing at least one of pricing information and rationing information regarding amount of consumption reduction.

37. (Cancelled)

38. (Cancelled)

39. (Currently Amended) The device radio broadcast control signal of claim 36, wherein said signal is an encrypted signal.

40. (Currently Amended) A system for automatic management of demand for non-durables, which system comprises:

a Multi Utility provider configured to transmit radio control signals to a plurality of End-users on a radio broadcast channel wherein said Multi Utility provider broadcasts the control signal via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems;

distributed intelligent home gateways operable to transmit a data communication signal for providing End-user return information to said Multi Utility provider, thereby to enable non-durables delivery control and pricing influenced by demand, said signal containing at least non-durables consumption information and using a signal channel different from said radio broadcast channel.

41. (Currently Amended) A method for communication between a Multi Utility provider and End-users said method comprising:

broadcasting a radio broadcast signal from said Multi Utility provider broadcasted via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems wakes up one Enduser's gateways at a time for collecting non-durables consumption data,

~~returning a signal from a plurality of End users to a Multi Utility provider as a response to received signals from the Multi Utility provider, utilizing wherein a radio broadcast signal from said Multi Utility provider broadcasted via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems wakes up one Enduser's gateways at a time for collecting non-durables consumption data, and a SIM card that is identical for all End-users, for establishing [[a]] the is used return signal using telephone or cellular connection to said Multi Utility provider for delivering said data.~~

42. (Previously Presented) An apparatus for return signaling in a two-way communication network between a Multi Utility provider and a plurality of End-users, said apparatus being an apparatus at each End-user's premises and comprising:

an intelligent home gateway operative to receive a wake-up radio broadcast signal utilizing any one of the RDS, RBDS and DAB systems that triggers metering action, and

a metering point gateway operative to establish telephone or cellular connection to said Multi Utility provider by means of a SIM card that is identical for all End-users, for delivering metering data regarding the respective End-user's consumption of non-durables.

43. (Previously Presented) The method of claim 1, wherein said method further comprises the step of:
providing to the End-users prices in real time.

44. (Currently Amended) The method of claim 1, wherein said method further comprises the step of:

said distributed intelligent home gateways [[boxes]] transmitting back to said Multi Utility provider instant or semi-instant non-durable consumption values at said End-users' premises, thereby collectively influencing market pricing of said non-durables.

45. (Previously Presented) The system of claim 20, wherein said system further comprises means to provide to the End-users prices in real time.

46. (Currently Amended) The system of claim 20, wherein said distributed intelligent home gateways [[boxes]] further comprises means to transmit back to said Multi Utility provider instant or semi-instant non-durable consumption values, thereby to collectively influence market pricing of said non-durables.

47. (Previously Presented) The radio broadcast control signal of claim 35, at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems.

Please add the following new claims:

48. (New) A method for initiating reduction of non durables at end users when an emergency on a grid is detected, initiated by one of: a grid operator; a grid owner or authorities, wherein the method comprises the steps of:

a. informing a specialized information broadcast company from one of: a grid operator, a grid owner or authorities to initiate rationing;

b. transmitting a rationing command from the specialized information broadcast company utilizing one of RDS, RBDS or DAB radio broadcast control signal with capability of carrying data;

c. turning on or off loads at End-users premises based on pre-specifications that indicates apparatuses to be interruptible and received rationing command utilizing distributed intelligent home gateways as switching means at End-users premises where the turning off is non reversible from End-users site;

d. transmitting a "de-rationing" command from the specialized information broadcast company utilizing one of RDS, RBDS or DAB radio broadcast control signal with capability of carrying data when one of a grid operator, a grid owner or authorities decides that emergency is over;

e. receiving the "de-rationing" command from the specialized information broadcast company at the distributed intelligent home gateways; and

f. turning selected loads on utilizing the distributed intelligent home gateways at end-users premises.

49. (New) A method according to claim 48 wherein step c further comprises the step of:

deciding at a predetermined time interval by one of a grid operator, a grid owner or authorities if another round of rationing is needed.